

# Environment Quarterly

Kwartaalike Omgewingsverslag • Tikologo ka Kotara • Mupo nga Kotara



**SA's Big Five of the Deep**  
**Building South Africa's**  
**sustainable fisheries**



forestry, fisheries  
& the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA



# Department of Forestry, Fisheries and the Environment

# 2024

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### ENVIRONMENT DAYS

2 February	World Wetlands Day
3 March	World Wildlife Day
23 March	World Meteorological Day
22 April	Earth Day
12 May	World Migratory Bird Day
22 May	International Day for Biological Diversity
5 June	World Environment Day
8 June	World Oceans Day
17 June	World Day to Combat Desertification and Drought
31 July	World Ranger Day
16 September	International Day for the Preservation of the Ozone Layer
22 September	World Rhino Day
1-30 September	National Arbor Month
1-31 October	National Transport Month
21 November	World Fisheries Day

### PUBLIC HOLIDAYS

1 January	New Year's Day
21 March	Human Rights Day
29 March	Good Friday
1 April	Family Day
27 April	Freedom Day
1 May	Workers' Day
16 June	Youth Day
17 June	Public Holiday
18 July	Nelson Mandela International Day
9 August	National Women's Day
24 September	Heritage Day
25 September	Public Holiday
16 December	Day of Reconciliation
25 December	Christmas Day
26 December	Day of Goodwill



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### About the back cover image:

#### Mzimvubu River

Mzimvubu River or Umzimvubu River is located in the Eastern Cape Province. The river has its source in the northern region of the Eastern Cape, in the area of Matatiele and Mount Fletcher near the Lesotho border. The Mzimvubu flows with twists and turns generally in a southeastern direction and flows into the Indian Ocean through an impressive gorge known as the "Gates of St John" into an estuary located at Port St. Johns. It is approximately 400 km long with a catchment area of 19,853 km.

The best river fishing is generally from May to November in the Mzimvubu river. Many species of fish live in this sub-tropical region but the main river fish are Kob (salmon), Garrick & Grunter. During the spring & summer months Carp can be fished.



To use this QR code conveniently you must have a smartphone equipped with a camera and a QR code reader/scanner application feature.



# Editorial: Building sustainable fisheries for future growth



**Dear Valued Stakeholder,**

Hello and welcome to the March edition of the Environment Quarterly. As a team, we are proud to bring you this edition that was conceptualised and packaged as an education resource to deepen your knowledge and understanding around the massive contribution of our fishing sector to our daily lives.

According to the Worldwide Food for Nature report, the oceans are an essential source of food for over a billion people on earth. Fisheries and aquaculture provide food, jobs, incomes and livelihoods for millions

of people, and aquatic food systems are key to our future food security. According to the South African Government website, the fisheries sector in South Africa is worth around R6 billion per annum and directly employs some 27 000 people in the commercial sector. Thousands more and their families depend on these resources for food and other basic needs.

In November last year, the department announced the final outcome of the allocation of 15-year fishing rights to small-scale fishers in the Western Cape. The delegated authority on the minister's instruction issued grant of rights letters to a total of 62 small-scale fishing co-operatives, with a total membership of 3850 declared fishers.

The department is still in the process of developing a sustainable and financially viable basket of species for the small-scale sector. Some of the species that have been granted to date include commercial traditional line-fish species, west coast rock lobster, seaweed, bait species, abalone aquaculture ranching sites, net-fish species, white mussels, oysters, and hake handline.

Our Cover story focuses on the socio-economic benefits of the allocation of these rights to ordinary South Africans, especially fishing

communities along our coastal lines. Most of these individuals and their families have relied on the fishing sector for food and jobs for many years. Hear their voices on pages 4-5.

On page 8, we take a look at one of our partnership projects, the South African kelp farming project which centres around the benefits and harvesting of seaweed as a food source and a lucrative commercial industry. The department has also invested in skills and training of three young women in the project to publish research results of the kelp industry.

With human activities increasingly decreasing the delicate marine ecosystems and reducing fishing stocks, overfishing becomes a real change. As consumers, we have a responsibility to make fishing sustainable in order to protect the delicate fishing population.

We hope you enjoy this read and that it inspires you to make effective changes in the way you interact with the environment and its resources.

'Till next time,

**Editor**

*Erica*

## Meet our team

### Head of Communications and Advocacy

Peter Mbelengwa

### Editor-in-Chief

Shalen Gajadhar

### Editor

Erica Mathye

### Editorial Team

Dimpho Matlanato  
Veronica Mahlaba  
Tshegofatso Ndhlovu  
Zibuse Ndlovu

### Design & Layout

Brian Chapole  
Sibusisiwe Nxumalo  
Lebohlang Makhubela  
Dineo Ramogale

### Cover Image

DFFE Archives

### Photography

Ismail Ebrahim  
Graham Grieve  
Kaveesha Naicker  
SouthAfrica.co.za

### Contributors

Reshmee Brijjal  
Merle Van Diemel  
Sharndre Heuvel  
Suvama Parbhoo

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# SOUTH AFRICAN SHORES RICH IN BIODIVERSITY



The South African coastline covers more than 3 000 km, linking the east and west coasts of Africa. These shores are particularly rich in biodiversity, with some 10 000 species of marine plants and animals recorded.



The productive waters of the west coast support a variety of commercially exploited marine life, including hake, anchovy, sardine, horse mackerel, tuna, snoek, rock lobster and abalone.



On the east coast, squid, linefish and a wide range of intertidal resources provide an important source of food and livelihood for coastal communities. Marine life that is not harvested, such as whales, dolphins and seabirds, is increasingly recognised as a valuable resource for nature-based tourism.



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# Commitment to Small-scale Fishing Sector Growth

By Merle Van Diemel



**Above:** Messrs Jayden Jackson, Moelzert Japhta, Brandon Flusk and Kelvin Leibrandt (back) returning from the mornings catch at Gordon's Bay Harbour.



**Above:** Mr Daniel Ruiters from the Hondeklipbaai Cooperative is preparing the lobster nets for the next trip while Messrs Nicolaas Cloete and Bernard Cook are getting the anchor rope fixed. **Photo: Supplied**

The small-scale fisheries sector in South Africa has undergone a detailed revamp, which has included stricter legal procedures, registration, and the establishment of cooperative organisations. It is noteworthy that 172 small-scale fishing cooperatives have been granted 15-year fishing rights, indicating a substantial step forward in the growth of the sector.

On 13 November 2023 the Western Cape province was issued grant of rights to 62 small-scale fishing cooperatives, comprising 3849 declared fishers. This milestone marks the completion of small-scale fishing rights being granted across all four coastal provinces in South Africa.

Mr Saasa Pheeha, Chief Director: Marine Resource Management explained that from 2016 to 2019, the Department began a process of allocating small-scale fishing rights across South Africa. Then in 2018, rights were granted in the Northern Cape and in 2019 and 2020, in KwaZulu-Natal and the Eastern Cape respectively. Mr Pheeha stated: "Before 2014, fishing rights were only allocated to the commercial fishing sector leaving out many local fishing communities.

Following a court ruling, a Small-scale Fisheries Policy (SSFP) was developed in 2012, and approved in 2013. The Marine Living Resources Act (MLRA) recognised three types of fishing: Commercial, Small-scale, and Recreational fishing. In 2015,

the MLRA was amended to recognise small-scale fisheries, replacing subsistence fishing."

Fishing with a small-scale fishing permit serves to allow small scale fishing cooperatives to legally catch fish species for food security or personal use and trading certain species commercially to improve on their livelihood. MLRA Regulations and SSFP specify which species can be caught for these purposes.

The SSFP in South Africa mandates that fishing rights be allocated to registered Community-based Legal Entities. "Species granted so far include traditional line-fish species, West Coast Rock Lobster (WRCL), seaweed, bait species, abalone aquaculture ranching sites, net-fish species, white mussels, oysters and hake handline," highlighted the DFFE's Acting Director: Small-scale Fisheries Management, Ms. Bernacia Mullins.

Ongoing research keeps tabs on the biological sustainability of the marine resources, helping the Department decide how much quantum of fish and/or effort levels to allocate within and between various fishing sectors to ensure these resources are used sustainably. The DFFE has recently published the updated **Status of the South African Marine Fishery Resources Report: 2023**. The report presents the most up-to-date information and analyses of the status of marine fishery resources in South Africa and can be found online.

The Department offers various avenues for engagement, including Scientific and Management Working Groups where representatives of right holders, non-governmental organisations and civil society representatives can participate in discussions on how best to manage the marine resources jointly. Additionally, there are roadshows and field visits to cooperatives and communities. Regular interactions with industrial bodies and interest groups recognised under Section 8 of the MLRA are also undertaken. Moreover, the Department is working on establishing co-management structures in alignment with the Small-scale fisheries policy.

### Voices from the Fishing Communities

Mr Ayanda Yekani, Chairperson of the Siyaphambili Primary Fishing Cooperative in Hamburg, Eastern Cape is deeply rooted in the fishing industry. Growing up in Kwazakhele, he assisted his grandfather with preparing fishing gear by hand. Mr Yekani and the Cooperative are actively involved in catching squid, abalone, and various other species. They maintain strong relationships with cooperatives across the Eastern Cape and the Black Fisheries Association. With three decades of experience, Mr Yekani is advocating for bottom-up decision making and respect for future generations.

Mr Maxwell Moss, a community activist from Saldanha Bay, vividly remembers the significance of the passing of the Marine Living Resources Amendment Bill in 2013, a milestone celebrated by small-scale fishers. Raised amidst flourishing marine life, Mr Moss witnessed fishing's pivotal role in sustaining his community. However, challenges like overfishing, poaching, and climate change necessitated policy changes. Despite interim relief, poverty surged as fishers faced restrictions on harvesting. "Fishing is one of the most dangerous occupations: Fishermen go out in a small boat while it is still dark, often in misty and treacherous weather conditions."

Mr Moss highlights the tragic loss of Mr John-Ruby Dirks and Mr Sydney Buakwe from Lamberts Bay. They drowned on 24 January 2024. These unsung heroes lacked protection under labour laws. Mr Moss's ongoing advocacy for affected families underscores the urgent need for equal rights and protections for all workers, including fishermen, under relevant legislation.

Ms Solene Smith, Vice-Chairman of Langebaan Co-operative along the West Coast, has over 25 years experience working with fishermen. She actively participated in policy inputs and organising fishermen into organisations like Masifundise and Coastal Links, advocating for their rights in Parliament. Empowering herself and other women in fishing has been her driving force, emphasizing their crucial historical and present role. "Women like me and others are not just involved in selling fish products but are also venturing into sea as skippers, owning boats, and contributing significantly to their communities' fishing activities."

Mr Daniel Ruiter is a lifelong resident of Hondeklip Bay in the Northern Cape and fisherman with 46 years of experience at sea. He is currently serving as the secretary of the Longtime Hondeklipbaai Fishing Primary cooperative. Mr Ruiter is deeply involved in both local fishing efforts and small-scale cooperative initiatives. He has witnessed firsthand the challenges facing his community, from youth unemployment to the environmental impact of coastal mining on marine life, affecting fishermen like himself. With support from organisations like the Department of Forestry, Fisheries, and Environment (DFFE), Mr Ruiter and his fellow fishermen are determined to make a big impact and inspire other communities to do the same.

Several boats returned from their early morning catch of West Coast Rock Lobster at Gordon's Bay harbour on 14 February 2024. "We are grateful that fishing rights were finally granted to the Strand cooperative," Mr Andre Leibrandt, vice-chair said. He praised the Department for its continued support. Messrs Enrico Willemse and Jerome Davids, members of the Day Workers of Sir Lowry Pass cooperative remained hopeful that they will become members of the cooperatives in future.

**"The Department is cognisant that much more needs to be done to support the Small-scale Fishing Sector to ensure continuous growth and development, and we are very committed to this process," Minister Creecy expressed at the launch of the Western Cape Small-scale Fishing cooperatives.**



#### **About the contributor: Merle Van Diemel**

Merle Van Diemel is a Senior Communication Officer: Media Relations and Internal Communications in the Directorate: Communication Services in Cape Town. She holds a master's degree in Public Relations Management from the Cape Peninsula University of Technology.



# AQUACULTURE FARMING

The demand for fish products globally is projected to grow by 47% by the year 2030 and the Aquaculture sector is expected to meet more than half of this demand. Also known as Aquafarming, Aquaculture refers to the farming of aquatic animals and plants like fish, shellfish, and seaweed in natural or controlled marine or freshwater environments. According to The Food and Agriculture Organisation, South Africa has suitable environment conditions that allow for aquaculture development and opportunities for commercial production of various cultured species. The most popular species that are farmed in south Africa are;



## ABALONE

The Perlemoen as South Africans call it is a flattened sea snail with ear-shaped shells, which inhabits coastal waters across the world. Globally, it is considered to be a delicacy which has led to it being under threat due to poaching and overfishing. *Haliotis Midae* is the scientific name for the South African Abalone, One of the most valuable species of Abalone in the world. 90% of the abalone on the global market comes from Aquaculture, it takes approximately 3 to 4 years for farmed abalone to reach market size.

**FUN FACT:** A fully grown abalone can spawn over a million eggs in one setting.



## TROUT

One of South Africa's most well-known and recognised fish species, Trout are closely related to Salmon, with the only difference being that the species found in South Africa does not venture into coastal or saline waters during their respective life cycles. The process from freshwater to saltwater to plate takes about 18 months, making trout another popular form of Aquaculture. There are two types of trout farmed in South Africa, namely the Rainbow and Brown trout, both of which are listed under the National Environmental Management Biodiversity Act as a category 2 Invasive Species with restricted activity.

**FUN FACT:** Trout are born without scales and remain without them for the first month of their life.



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## OYSTERS



Oysters are filter feeding bivalved-double shelled water molluscs with rough and scaly shells that are oval to pear-shaped. They remove phytoplankton from seawater and convert it to edible protein. The Pacific oyster (scientific name: *Crassostrea gigas*) is cultivated in the sheltered bays of Knysna lagoon and Saldanha Bay and is the most commonly cultivated oyster in the world because it grows relatively quickly, reaching an edible size within two years. This type of oyster can tolerate a wide range of temperatures from -2 °c to 35°c with temperatures over 20°c being optimal for production.

**FUN FACT:** All Oysters are born male but can change their gender after a year of life.

## CATFISH



South Africa's rich water resources make it an ideal location for the farming of catfish. The warm climate and ample access to freshwater bodies provide optimal catfish growth and reproduction conditions. Catfish in South Africa are farmed inside Greenhouse tunnels or warehouses with temperatures maintained by means of electric heat pumps and boilers. Catfish farming is considered to be affordable, because Catfish can survive in poor water conditions due to their ability to gulp air directly using their accessory breathing organ instead of their gills.

**FUN FACT:** Catfish are cannibals; bigger catfish can sometimes prey on smaller catfish.

## MUSSELS



Mussels are fresh and seawater bivalve molluscs-double shelled snails which filter feed on algae from their surroundings. There are two species of mussels that are farmed in South Africa, namely the Mediterranean Mussel (*Mytilus galloprovincialis*) and the South African black mussel (*Choromytilus meridionalis*) which is indigenous to South Africa. They are mostly farmed in Saldanha Bay, an environment perfect for mussel farming due to its windy west coast which creates upwelling currents that bring in clean, cold and nutrient rich water.

**FUN FACT:** Mussels are filter feeders; one mussel can filter up to 3 litres of water per hour.



# Seaweed Farming for a sustainable future

By Tshegofatso Ndhlovu



**Above:** One of the research assistants and DFFE scientists measuring the growth rate of the kelp.

In a world where climate change is rapidly becoming a factor in all aspects of our lives, it has become very important for not only us ordinary people to care for our planet but for companies and big corporations to take a closer look at their operational methods to ensure long-term sustainability. Seaweed farming is becoming the fastest-growing aquaculture sector because of the many benefits it provides for farmers, communities and the environment at large.

Seaweed farming is the process of cultivating and harvesting seaweed (a type of marine algae found in salt water). The process requires little to no resources and is sustainable as seaweed is an extractive crop that utilises natural or anthropogenic nutrients from sea water and therefore is largely beneficial to the environment.

Seaweed is very nutritional and contains a wide range of minerals, amino acids, and iodine and can be found in both human and animal food as well as a variety of medicinal and beauty products, biofuels, and environmentally friendly packaging.

## The South African Kelp Farming Project

In the years 2021-2022 the Foreign Commonwealth and Development Office (FCDO) commissioned the nonprofit Bivalve Shellfish Farmers Association of South Africa (BSASA), in collaboration with the Department of Forestry, Fisheries and the Environment (DFFE), to conduct a 3-month pre-feasibility study (Phase 1) to assess the potential for the commercial cultivation of African kelp along South Africa's West Coast.



The project arose from an expression of interest from industry, arising from international trends, to explore seaweed farming in order to diversify the sector as well as improving sustainability. This study was later commissioned to proceed to a 30-month feasibility study (Phase 2).

The DFFE has played a lead role in facilitation, technical support and strategic co-ordination of this project which is a unique collaboration between industry, the scientific community and government to unlock potential benefits of kelp farming for the broader community, specifically coastal communities.

The overall goal of The South African Kelp Farming project is to disseminate information and research results available to a broad stakeholder base, including the existing kelp industry and new potential entrants in order to build a sustainable Kelp Aquaculture Industry in South Africa. In pioneering and developing new skills, the project and DFFE staff have already trained three young females in hatchery and grow out technology in this exciting new field.

The Director for Aquaculture Research, Ms Andrea Bernatzeder whose key role in the project is to provide technical and strategic direction and oversight to the project from government, said although the project is limited to baseline research, she is proud that they empower women.

“The project has employed three young female students who assist with undertaking technical aspects as well as building capacity in developing technology. One of the three women is employed within the industry and the other two are furthering their own qualifications with data collected from the project,” said Ms Bernatzeder.

### Benefits Of Seaweed Farming

- Seaweed farming is considered to be a sustainable food source due to its non-requirements of fresh water, pesticides, or fertilisers. This low environmental footprint makes it an important ingredient of future food supply.
- Seaweed acts as an underwater forest with an ability to absorb carbon, nitrogen, and phosphorus in the water it grows in, improving the water quality and reducing ocean acidification. This makes seaweed a valuable tool in the fight against climate change.
- Seaweed farming can boost the economy around fishing communities as overfishing and climate change leads to the decline of fish stocks in the water. The farming of seaweed gives these communities a chance to pursue an economic alternative to improve their lives.



**Above:** Not only do kelp forests produce oxygen, they are also a food source for abalone.



**Above:** Two female research assistants working on the kelp farming project.



#### About the contributor: Tshegofatso Ndhlovu

Mr Tshegofatso Ndhlovu is a Senior Communications Officer in the Communications and Advocacy Chief Directorate. He holds an Advanced Diploma in Journalism from the Tshwane University of Technology and is an avid sports fan with his favourites being Tennis and Formula 1.

# Control Engineering Technician

By Veronica Mahlaba



**Above:** Mr Engel has worked over 20 years in his field and still enjoys sailing with the Africana. **Images by Zahier Isaacs**

Can you imagine sailing the expanse of the ocean, whilst at work on a vessel? In this edition of the Environment Quarterly, we speak to Mr Hermann Engel who grew up in Heathfield in the southern Suburbs of Cape Town and we explore his career as a Control Engineering Technician. He works under the Directorate: Fisheries Research Infrastructure and Operations on the Africana Vessel, owned by the Department.

## 1. Briefly tell us the purpose of the Africana vessel

Firstly, I would like to indicate that the Africana vessel is 77.85m (meters) in length. The Africana is a fisheries research vessel a specialised trawler dedicated to conducting independent fisheries surveys.

Its primary purpose is to allow scientists to acquire accurate oceanographic, biological, acoustic, geographical and atmospheric data through various underway or over-side deployments to accurately estimate the abundance and distribution of fish stocks.

This information is crucial for determining sustainable catch limits and the development

of management strategies to prevent overfishing and ensure the long-term health of fish populations. This data also supports a broad spectrum of marine research beyond fisheries, contributing to our overall understanding of oceanography and marine biology.

## 2. What academic qualifications did you obtain?

I have a National Diploma in Electrical Engineering (Light Current) which I obtained through Peninsula Technikon, now known as the Bellville Campus of Cape Peninsula University of Technology.



### About the contributor: Veronica Mahlaba

Ms Veronica Mahlaba is a Senior Communication Officer in the Chief Directorate: Communications at the Department of Forestry, Fisheries and the Environment.



### 3. What does your job entail on the vessel?

I provide specialised technical support onboard the Africana in the form of Electronic, Electro-Mechanical, Hydro-acoustic, IT, Testing and Calibration of the Scientific Systems. I do repairs, maintenance, modifications to the systems using specialised test and measurement equipment together with hand and power tools.

### 4. How long have you been doing this job?

I joined the Department in September 2000 and spent my first six months on various research vessels. In my 23 years of service, I have been blessed to sail on all the Department's research vessels, covering the entire South African coastline, including relief voyages to the Prince Edward Islands .

### 5. What inspired you to take this career path?

From a young age, I was driven to find out how things worked, particularly the power of electricity. It amazed me how power could be used for innovation, communication, and entertainment, to name a few. My family had strong ties with the fishing community in Kalk Bay, and I was fortunate to find a career that combines these two passions.

### 6. What subjects must you do in school for this career?

Any engineering field requires Mathematics and Science subjects in high school to gain admission at an institution of higher learning.

### 7. What motivates you in your job?

In my two-decades as a Marine Engineering Technician, the ocean's vastness and complexity still fascinates me. The voyages, fascinating marine researchers and the knowledge that the work we do means something is what motivates me.



In my 23 years of service, I have been blessed to sail on all the Department's research vessels, covering the entire South African coastline, including relief voyages to the Prince Edward Islands.



Above: From a young age, Mr Engel was fascinated by the the ocean's vastness and complexity.

### 8. What do you find most challenging and rewarding about your work?

I find being away from my family for long periods of time and missing some important milestones to be the most challenging at this stage of my life, which is funny because in my twenties, being able to travel for extended periods at sea was what I looked forward to the most.

The most rewarding aspect of my work is being able to share my experiences with future generations of marine researchers.

### 9. What advice would you give to the youth who are interested in this field?

The marine engineering field continues to grow. Identify what you are interested in, whether it's mining, research, conservation or deep-sea exploration. A national diploma or degree in electrical engineering will allow you to successfully pursue a career in this field.

### 10. Where do you see yourself in the next 5-10 years?

My goal is to progress to the management and design of scientific platforms. I want to spearhead the creation of groundbreaking scientific fisheries research vessels. Imagine a ship that isn't just a floating lab but an embodiment of sustainable engineering and technological innovation. A vessel that sets global standards and opens new avenues in marine research. That's my ambition.

# SA's Big Five of the Deep

South Africa is a land full of iconic wildlife. It comes as no surprise that seeing the impressive Big Five (lion, leopard, African elephant, buffalo, and rhinoceros) is at the top of many tourists' bucket lists. However, the extraordinary natural beauty does not end with these iconic creatures. South Africa's coastal waters are home to a diverse range of species, with five spectacular marine fauna standing out. Known as the Marine Big Five, they are the African penguin, Great white shark, Southern right whale, Bottlenose dolphin, and the Cape fur seal. Here are some insights into these extraordinary animals:



## African penguin

This charismatic, endangered, and protected species was previously known as the jackass penguin due to its loud donkey-like bray. African penguins are flightless with distinctive black and white plumage. Their streamlined bodies, thick feather coats, and modified wings/flippers make them ideal for life at sea. They have black webbed feet, a short tail, a powerful black bill, distinctive pink patches above their eyes, and a distinct pattern of black spots on their white chests. Adults weigh between 2.2 and 3.5kg. Though clumsy on land, they make up for it at sea, travelling at speeds of up to 20 km/h.

**Habitat:** They are found along the Southern African coastline, from the central Namibian coast to Algoa Bay in the Eastern Cape. There are famous populations at Betty's Bay, Foxy Beach, Boulders Beach and False Bay on the Southern Peninsula.

**Interesting Fact:** African penguins are monogamous. Breeding pairs return to the same nest, usually a burrow under vegetation or a rock, or a man-made nest, every year.



## The great white shark

The iconic great white shark is the largest predatory fish on Earth. While its name refers to the pearly white colour of their undersides, they are slate-grey in colour. Great whites are known for their great size, with average lengths for males varying between 3.4 - 4.0 m while females are bigger, with average lengths ranging between 4.6 - 4.9 m. Adult sharks can reach between four and a half and six meters in length, weighing in at around two and a half tons and swimming at speeds of up to 24.1 km/h. These fantastic beasts are classified as endangered and need protection from extinction.

**Habitat:** In South Africa they can be seen along the Western Cape at Gansbaai, Hermanus, Mossel Bay, and False Bay due to the abundant supply of Cape fur seals which happen to be their primary feed.

**Interesting Fact:** Aside from their exceptional sense of smell, great white sharks can detect electromagnetic fields emitted by their prey.



## The southern right whale

Southern right whales are the rarest of all large whale species and are regarded as one of the world's largest animals. These deep-sea giants enjoy waving their fins and bobbling their tails, leaving those who see their antics in awe. If you're lucky, you might see these 16-meter-long, 60-ton ocean giants breaching out of the water, leaving massive splashes in their wake. These magnificent sea heavyweights can live up to 100 years.

**Habitat:** They're often spotted along the Western Cape coast, particularly off the charming seaside town of Hermanus.

**Interesting Fact:** Right whales got their name from being considered the 'right' whales to hunt because they float when killed and have a high blubber content.



## The Cape fur seal

The Cape fur seal is the only seal native to the Southern African coastline. These warm-blooded creatures can regulate their body temperatures in the icy cold Benguela current that runs along the Skeleton Coast and Western Cape coast. Because of this, they are able to spend at least 30% of every month at sea. Their large eyes enable them to see both forward and sideways, which is a unique advantage when it comes to hunting and avoiding being hunted. They have powerful fore flippers, rotational back flippers, a substantial layer of subcutaneous fat and an exceptionally thick double coat of fur. Males are much bigger than females and can weigh in at 360 kg, while females only weigh about 75 kg.

**Habitat:** They're found in colonies on rocky shorelines and islands from Algoa Bay in South Africa to Cape Fria on the Namibian coast.

**Interesting Fact:** The bulls come ashore in October to establish territories. They are joined in November by about 50 females that are already pregnant and soon to give birth, and then mate with the bulls again.



## The bottlenose dolphin

Bottlenose dolphins are known for their intelligence, playfulness, and curious behaviour towards humans. Bottlenose dolphins are fascinating to watch in their natural habitat as they surf through breakers. They can swim as fast as 22km/h. These streamlined, slender grey mammals can grow up to 2.5 m long with their weight reaching around 275 kg.

**Habitat:** They are often spotted along South Africa's coast, particularly in Plettenberg Bay and along the Garden Route.

**Interesting Fact:** A group of dolphins will work together to create a mud ring to trap fish while some of the dolphins in the group wait outside the ring for the fish that try to flee, gulping them down as snacks.



## Fisheries Management

By Veronica Mahlaba



**Above:** South Africa's locally produced abalone feed is considered to be the best in the world.

**T**he Department's aim is to radically transform our approach to environmental protection, while also balancing it with socio-economic development, which are crucial pillars on which sustainable development rests.

The Branch: Fisheries Management led by Deputy Director-General, Ms Sue Middleton, adheres to the Marine Living Resources Act (MLRA) 18 (1998) which provides for the conservation of the marine ecosystem, the long-term sustainable utilisation of marine living resources and the orderly access to exploitation, utilisation and protection of marine living resources in a fair and equitable manner to the benefit of all the citizens of South Africa; and to provide for matters therewith.

The purpose of the Branch is to promote the development, management, monitoring and sustainable use of marine living resources and the development of South Africa's fisheries sectors. Sustainable livelihoods are being achieved through aquaculture growth and fisheries economic development. To function, the Branch has the following five Chief Directorates:

### **Aquaculture Development and Freshwater Fisheries**

Ensures the sustainable growth and development of aquaculture and inland fisheries in South Africa. Through the provision of technical support and essential services to aquaculture stakeholders, the provision of integrated platform for management of aquaculture, scientific research, and advice, overseeing the implementation of Aquaculture Lab Initiatives and management of freshwater inland fisheries.

### **Fisheries Research and Development**

They are mandated to monitor 22 fisheries sectors, covering hundreds of different resources, ranging from hake, tuna and lobsters to anchovies, oysters and abalone, and many more. They do research to monitor wild fish stocks, and consider environmental variability and biological unpredictability, so that people do not over-fish and compromise the sustainability of the fish stocks. Over-fishing leads to a collapse of fish stocks, which then leads to loss of economic potential, increase in coastal poverty and risk to food security.

### **Marine Resources Management**

Officials manage the administration and support of inshore fisheries sectors in accordance with legislative requirements. Provide leadership and support for the development of the inshore fisheries sector. Ensure cooperative governance and enhance service delivery and stakeholder relations through participation. Manage the inshore fisheries sector to ensure sustainability of the sector. They provide technical and administrative support for queries raised by the Appeals Advisory Task Team.

### **Monitoring, Control and Surveillance**

The mandate of MCS is to ensure sustainable utilisation of marine living resources through land and sea-based inspections and enforcement of the Marine Living Resources Act (MLRA) 18 of 1998, and its regulations. They have 30 coastal offices along the South African Coastline which stretch from Port Nolloth in the Northern Cape to the northern eastern border with Mozambique, with a coastal line of 3200 kilometres in length.

### **Financial Management of the Marine Living Resources Fund**

The unit is responsible for the administration and managing the finances of the Marine Living Resources Fund. The main objective of the unit is to ensure good governance is adhered to and that good financial practices are implemented.

The greatest achievement of the Branch thus far includes the Fishing Rights Allocation Process (FRAP) in 2021 and the Allocation of Small-Scale Fishing Rights to Small-Scale Fishing Co-operatives in 4 coastal provinces, namely: Western Cape, Eastern Cape, KwaZulu-Natal and Northern Cape.

# Royal visit to local garden

By Veronica Mahlaba



**Above:** Dr Cebisa Mabena explains the importance of indigenous knowledge and its value in the advancement of medicine and healing in South Africa.

Minister Barbara Creecy hosted His Royal Highness, Prince Edward, Duke of Edinburgh at the Pretoria National Botanical Garden recently.

The request came from the High Commission of the United Kingdom of Great Britain and Northern Ireland to host an engagement with His Royal Highness with the intention to view some of South Africa's indigenous flora and fauna. This opportunity gave an overview of the work of the South African National Biodiversity Institute (SANBI) to preserve South Africa's unique flora.

Prince Edward is a member of the British Royal Family. He is the youngest child of Queen Elizabeth II and Prince Philip, Duke of Edinburgh's son, and a sibling to King Charles III.



**Above:** Minister Barbara Creecy with SANBI CEO, Mr Shonisani Munzhedzi (right). Chief Director of the National Botanical Gardens, Mr Christopher Willis welcomed Prince Edward, Duke of Edinburgh.



**Above:** Prince Edward is gifted with 'umqhele' (a Zulu headband) by the CEO of Mathong African Heritage, Dr Cebisa Mabena.



# Minister visits Lowveld

By Tshegofatso Ndhlovu



**Above:** Talking a walk, the Minister explores different plant life in the botanical garden.

**T**he Minister of Forestry, Fisheries and the Environment, Ms Barbara Creecy visited the Lowveld National Botanical Gardens in Mbombela to overview the garden and inspect the repair work in progress as a result of flooding where the suspension bridge and viewpoints were washed away.

The Minister emphasised that botanical gardens were important tools for education and recreation. "The Lowveld Botanical Gardens forms part of the

many gardens that we have in our country. This one in particular, is special because it hosts a wide range of different biomes such as the African Rain Forest and the South African Temperate Forest, therefore, these kinds of visits from the department are crucial because they allow us to showcase and educate people about the natural assets that we have here while encouraging them to bring their loved ones to the garden for picnics and other recreational activities," Said Minister Creecy.

## DM fights environmental degradation in Mbombela



**Above:** The municipal Cleaning and Greening programme is aimed at combating environmental degradation and tackling issues of littering and illegal dumping in communities.

**T**he Deputy Minister of Forestry, Fisheries and the Environment, Ms Makhotso Sotyu joined by the Deputy Minister of Agriculture, Land Reform and Rural Development, Mr Mcebisi

Skwatsha and the Deputy Minister of Trade, Industry and Competition, Ms Nomalungela Gina launched the Municipal Cleaning and Greening programme in the city of Mbombela, Mpumalanga.

In her welcome remarks Deputy Minister Sotyu said the Municipal Cleaning and Greening Programme aims to create employment for 2000 people.

"The main goal of the cleaning and greening programme is to ensure that our communities are not only litter free but that they are spaces that people will enjoy living in and not only that, the programme also is centred around the creation of jobs for 2000 people with a key focus on the empowerment of women, the youth and persons with disabilities," said Deputy Minister Sotyu.

# Join the global City Nature Challenge

By Reshmee Brijjal and Suvarna Parbhoo Mohan



**Above:** The rainy weather did not stop participants from exploring the nature in their cities.



**Above:** Participants took a bit of a break before continuing with their explorations.

**W**ant to be a part of a community tracking what is happening in our natural world? This is your chance. Join in by becoming a part of the City Nature Challenge (CNC). Initiated in 2016 by community science staff at the Natural History Museum of Los Angeles County and the California Academy of Sciences as a competition, the City Nature Challenge is an annual citizen science event held in the last week of April and has grown into a national and international event, inspiring people around the world to take note of the wildlife in their cities.

The main purpose of this global event is to both showcase the extent of biodiversity within a city, as well as encourage and promote science and nature learning to the greater public. The competition sees scientists, city residents and visitors teaming up using the iNaturalist App on mobile devices and the website to record the variety of fungi, plants, animals, and even microorganisms like bacteria that make up the natural world in their cities.

The City Nature Challenge is held over two parts – an observation period comprising of four days of bioblitzing followed by an identification period comprising 10 days of identification before the challenge culminates with announcements of the cities who recorded the most number of observations, the highest number of species and those who had the most participants.

## Cape Town in Top Five

In 2019 the City of Cape Town was the first southern African representative, and topped the leaderboard for the number of observations made and the number of species recorded. Fast-forward to five years later, 31 cities across southern Africa participated in the City Nature Challenge 2023, alongside 482 cities from 46 countries with the City of Cape Town being featured in the Top five

of the global leaderboards for most observations and most species observed. The CNC 2023 Southern Africa results revealed eThekweni, Weskus and Nelson Mandela Bay having climbed up the leaderboards as well as newcomers, Buffalo City and Potchefstroom having contributed over 1000 observations.

While no new species have been observed during the City Nature Challenge thus far, species of conservation concern and invasive alien species records have been invaluable. Over the last CNC, 551 threatened species (plants, birds, mammals, reptiles, amphibians and fish) and 245 invasive alien species were recorded. South Africa has an assortment of data collection projects set up on iNaturalist that run on an ongoing basis to collect data for meaningful analysis by the conservation authorities, responsible for managing and reporting on biodiversity at the provincial and municipal scale.

## Connect with Nature

This year, the City Nature Challenge will run through 26 to 29 April 2024 featuring 34 Southern African cities. We encourage you, your family, friends and broader community to participate by connecting with nature, with each other and nature lovers around the world. Participating is as easy as 1, 2, 3...

1. Download the iNaturalist App using your smart phone, register by creating your profile, switch off your data and switch on your location.
2. Venture off into nature to observe species, take photos of wildlife (living or dead) you see by capturing the key features so that it can be easily identified.
3. Upload your observations onto the iNaturalist platform and wait to see what the nature community has to say about your observation!



# R2.67 billion project to create jobs boom

By Veronica Mahlaba



**Above:** Minister Creecy assisted with clearing alien invasive plants and stacking them to prevent soil erosion.

**T**he Minister of Forestry, Fisheries and the Environment, Ms Barbara Creecy launched a five-year programme worth R2.67 billion rand to implement the Working for Water Programme which aims to eradicate invasive alien plants and create 194 195 work opportunities throughout the country.

Minister Creecy committed to this in Heidelberg during the launch of the Gauteng Working for Water Programme worth R152 million, to implement projects across the five Gauteng municipalities namely, the City of Tshwane, City of Joburg, West Rand, Sedibeng, and the City of Ekurhuleni to clear 74 781 hectares over a period of five years, starting from the current financial year 2023/2024.

Biological invasions by alien plants are a major threat to biodiversity and ecosystem services, water resources and sustainable livelihoods. Invasive species exacerbate floods, droughts, wildfires, and have negative impacts for the forestry and agriculture sectors. Minister Creecy explained that biological invasions will exacerbate the effects of context of climate change and the extreme weather events associated with global warming. "It is for this reason our Department is happy today to announce this five year programme to combat alien species and the damage they do to our land, wetlands and rivers," she said.

According to the 2019 South African National Biodiversity Institute's Report on Biological Invasions, it details that invasive trees use 3-5% of South Africa's runoff water every year, which is a significant loss for a water-scarce country. Many species of

invasive plants are also less drought-resistant than indigenous ones and pose a greater fire risk. By displacing indigenous species and creating single species plantations, alien invasives also undermine our country's rich biodiversity which in turn negatively impacts our tourism potential. Invasive species also interfere in natural processes that can help mitigate the effects of natural disasters through the provision of ecosystem services. Examples being the role estuaries, wetlands and indigenous forests play during natural disasters such as cyclones and floods.

Minister Creecy stated that by clearing waterways and managing the spread of invasive species we are restoring natural habitats and simultaneously restoring ecosystem services that will assist us in the fight against the effects of climate change. To ensure sustainable clearing of alien species on a regular basis as well as sustained public employment, the department is contracting over a longer five-year period as opposed to short-term contracts in the previous cycle. For local small enterprises in rural communities this also offers a reliable revenue that can assist the enterprises to invest their businesses to ensure future opportunities.

"This means that the Working for Water Programme is growing and is advancing the inclusion of previously disadvantaged enterprises to participate more meaningfully in the value chain of clearing invasive alien species. In this way the Working for Water Programme advances transformation and prioritises the inclusive economy policies of government," the Minister added.



# Celebrating 20 Years of CREW

By Sharndre Heuvel

It all started back in 2003, when the Custodians of Rare and Endangered Wildflowers (CREW) programme had this brilliant idea to engage citizens in monitoring threatened plant species in South Africa. They thought, Why not get regular folks like us involved in keeping an eye on those plants that need a little extra love in South Africa?

This smart idea was inspired by the success of the Protea Atlas project, which provided the basis of creating the CREW programme. Fast-forward to the present, CREW has grown into a robust network of volunteers scattered across the country, ceaselessly providing critical insights into the status of these threatened plants, these volunteers are like the unsung heroes who keep giving us all the scoop on how our unique plants are doing. Over two decades, they've forged enduring memories, amassed invaluable experience, and significantly broadened their botanical knowledge.

CREW, a citizen science programme, stands at the forefront of environmental management, playing a pivotal role in realising national and global plant conservation goals. Beyond data collection, it is instrumental in tracking and safeguarding plant species of conservation concern. Providing a time series of information on the status of South Africa's threatened species via the national IUCN Redlist of Plant dataset, improving threat assessments. Moreover, CREW operates in key plant priority areas within South Africa focusing on the conservation of critical sites, for threatened plant species. But CREW is not just about collecting data as their mission extends far beyond this.

From its inception, CREW focused on monitoring threatened plant species and collecting data for the Red List of Southern Africa. It was not a walk in the park. This challenging task inspired the engagement of citizen scientists, enriching the programme and fostering a sense of belonging among participants. Despite its evolving nature, the core of CREW's success has been its connection with dedicated volunteers from all corners of South Africa, generously dedicating their time to taxonomic research and data collection.

The CREW data is integrated into decision-making processes, including management plans, screening tools, planning expansions of protected areas, and systematic biodiversity plans thereby enhancing monitoring and surveillance of threatened plants. Furthermore, CREW is deeply involved in both in-situ and ex-situ conservation practices. Over time, continuous monitoring of plants has yielded a wealth of knowledge about their populations and threats, which has been instrumental in prioritising species in need of conservation interventions, such as population recovery and restoration and actively responding to the succulent plant poaching crises.

The value of nationwide data collection on threatened plant species in South Africa is immeasurable. It offers a comprehensive understanding of these plants across diverse regions, guides taxonomic research, supports conservation prioritisation, informs policy, boosts ecosystem health, preserves biodiversity, and encourages international collaboration.



## About the contributor: Sharndre Heuvel

Sharndré Heuvel, is a conservationist who has recently transitioned to the role of Assistant Director: Project Management Biodiversity Assessments. Formerly serving as the CREW Programme Co-ordinator for the CFR Node since 2022, Sharndre's journey began as a conservation technician with CREW in 2019. With an Advanced Diploma in Nature Conservation and over a decade of experience, she is deeply fascinated by ecological functioning and processes, particularly the intricate interactions between organisms in natural systems.



CREW has also been a platform for continuous learning, with plant identification courses, expert lecturers, university collaborations and informative workshops. While the CREW network of volunteers have encountered various challenges, such as invasive alien species control, mining proposals, and urban expansion, they remain dedicated to protecting our precious plants. The passion for discovering new things has not heightened over the last two decades, and continues to inspire everyone involved, passing on invaluable lessons to the younger generation.

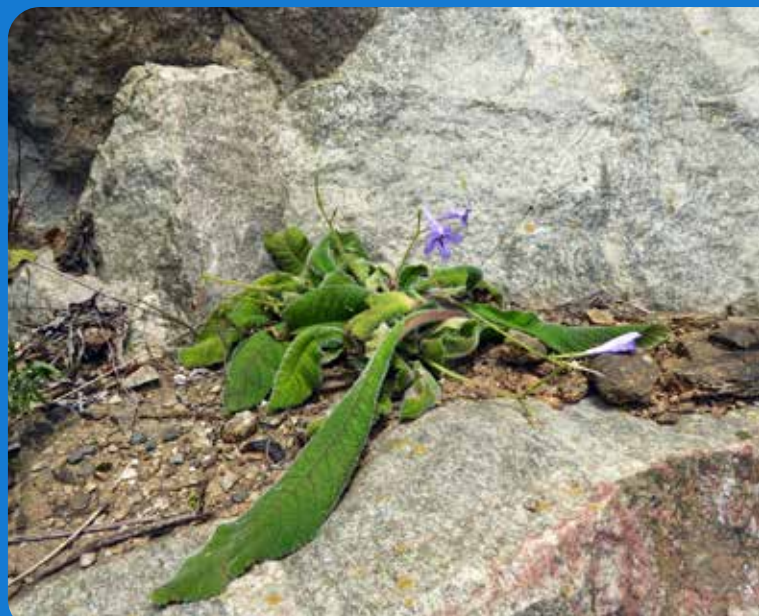
Additionally, CREW has been a key contributor to the national biodiversity stewardship initiative, collaborating with various organisations to incorporate private and communal owned land in biodiversity priority areas into an extension of the national protected areas network. Our citizen scientists have played a crucial role in preserving urban green spaces and fragments, building trust with passionate landowners, and providing ongoing data for new and proclaimed sites.

CREW's 20-year journey stands as a testament to the power of collaborative citizen science. It has played a pivotal role in understanding, conserving, and safeguarding South Africa's unique plant diversity, enriching our knowledge, and inspiring South Africans to join the bioblitz challenges that force us to observe the nature surrounding us while honing our skills to identify species of conservation concern.

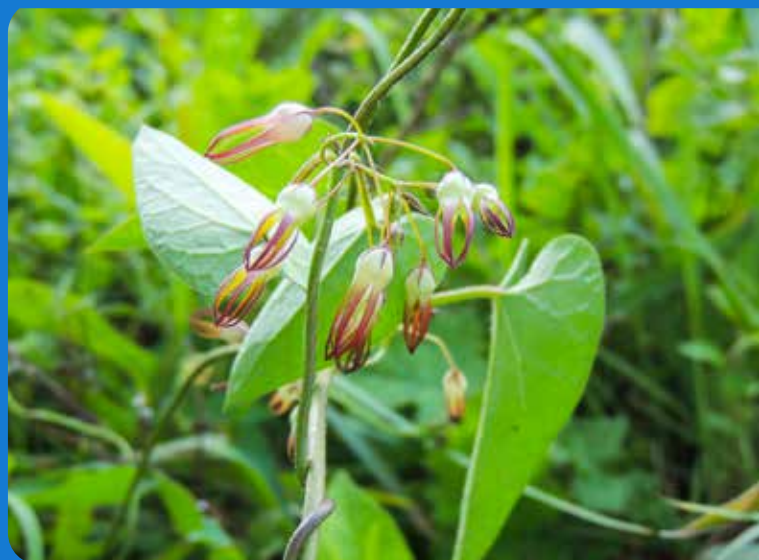
CREW has discovered about 80 new plant species and over 70 rediscovered species. Three species are now described in recognition of the CREW programme's input into plant taxonomy - *Aspalathus crewiana*, *Marasmodes crewiana*, and *Otholobium crewii* – with another one on the way... soon to be published. This will be a species for the CREW time capsule as the scientist describing it started out as a CREW citizen scientist!



CREW has also been a platform for continuous learning, with plant identification courses, expert lecturers, university collaborations and informative workshops.



**Above:** Critical Habitat Species, *Streptocarpus floribundus*.



**Above:** Rediscovered species in KZN, *Riocreuxia flanagania* var. *alexandrina*.



# Waste pickers' victory

By Tshegofatso Nahlovu and Veronica Mahlaba



**Above:** 2100 participants from the Mangaung Metropolitan Municipality have been recruited to take part in the In-House Municipal Model Cleaning and Greening Programme.



**Above:** Deputy Minister Sotyu accompanied by Deputy Minister in the Presidency, Ms Nomasonto Motaung with 5 Mayors from the Thabo Mofutsanyana District Municipality planted trees as part of the Ten Million Trees Programme.

**W**aste pickers from the Mangaung Metropolitan Municipality and the Thabo Mofutsanyana District Municipality in the Free State will heave a sigh of relief knowing they are employed within the Department of Forestry, Fisheries and the Environment's In-House Municipal Model Cleaning and Greening Programme.

Launched by Deputy Minister Makhotso Sotyu on 17 November in Mangaung and 28 November 2023 in Harrismith respectively, the Programme focuses on combating environmental degradation and eliminating litter and illegal dumping throughout the country through extensive public employment, emphasising the empowerment of women, youth and persons with disabilities.

Delivering her keynote address in Mangaung, Deputy Minister Sotyu says that waste pickers are vital in aiding government achieve its goal of a clean and healthy environment.

"Waste pickers play a pivotal role in the informal waste collection sector and have already demonstrated their value by assisting municipalities in saving landfill space and budgets under challenging conditions, therefore, by integrating them into formal waste management systems, we aspire to contribute to the country's GDP, fostering inclusive growth and sustainable development," she said.

Deputy Minister Sotyu also donated equipment to aid achieving the goals of ensuring that Mangaung remains clean. These include 8 bakkies, 2 tipper trucks, 3 tractor-loader-backhoes and 2 compactors which will be used in the landfill sites.

In Thabo Mofutsanyana District Municipality the Programme will lead to over 800 new jobs being created across the five local municipalities in the District. The Deputy Minister explained that the programme is the expansion of the Good Green Deeds flagship Programme, which has created work opportunities to date whilst creating a cleaner and safer environment, in collaboration with municipalities. "The mass employment drive aims to address the challenge of unemployment and the alleviation of poverty in communities. Since the beginning of the 2023/24 financial year more than 20 000 participants have been employed," elaborated Deputy Minister Sotyu.





# Lillydale runs for rhino

By Tshegofatso Ndhlovu



**M**embers of the Lillydale Community in Mpumalanga took to the streets in a 10km Rhino Awareness marathon recently. Hosted by the Department of Forestry, Fisheries and the Environment (DFFE) in partnership with South African National Parks (SANParks) under the theme: **Say No to Rhino Poaching, It Starts with Me**, the marathon was aimed at creating awareness about rhino poaching in communities that are near rhino habitats.

In the year 2023, South Africa suffered a loss of 499 rhinos due to poaching. 406 of these rhinos were killed on state owned properties and 93 on privately owned parks, reserves and farms. This is an increase of 52 in comparison to the 448 rhinos that were poached in 2022. The Kruger National Park recorded a 37% decrease from 2022 with a total of 78 poached in 2023 and no rhinos were poached in any other national parks.

Delivering her keynote address, Deputy Director-General for the Biodiversity and Conservation branch, Ms Flora Mokgohloa gave a thumbs up to all the participants of the marathon stating that their efforts in creating awareness for rhinos was vital. "I stand here today proud of every single person who has taken part in today's activities, from the youth to the elderly, your presence shows how committed this community is in the fight against poaching and this matters because the conservation of our species is a responsibility that belongs to all of us here and not just government," she said.

Deputy Director-General Mokgohloa went on to add that the marathon also gives effect to the

Integrated Strategic Management Approach to Rhino Management which was approved by Cabinet in 2014. "The Integrated Strategic Management Approach to Rhino Management has identified community empowerment as one of the interventions that need to be deployed in curbing rhino poaching, in turn making sure that a community such as Lillydale which is based next to a conservation park will see and feel the benefits of conserving our endangered species," she said.

The Mayor of Bushbuckridge Local Municipality, Cllr. Sylvia Nxumalo expressed how delighted she was to see that the Rhino Awareness Marathon was mostly attended by the youth. "When I arrived here today, I was filled with joy to realise that it is mostly young people that are taking part in this marathon today because as the future leaders and custodians of this community, the responsibility of making sure that our parks are up and running into the future lies with you," said Cllr. Nxumalo.

In her closing address Cllr. Nxumalo went on to say that the conservation of parks in Bushbuckridge Municipality is important because they provide a livelihood to the community at large.

"Unlike a lot of other municipalities, Bushbuckridge does not have a mine which creates employment therefore we need to start treating our conservation parks as our gold mines because they are a source of employment for most of our people and they help in boosting the tourism in our municipality so it is therefore important for us to continue fighting for our wild animals as they will ensure the longevity of our gold mines," said Cllr. Nxumalo.



# Women driving the waste sector

By Dimpho Matlanato



**Above:** The Deputy Minister of Trade, Industry and Competition, Ms Nomalanga Gina alongside the Deputy Minister of Forestry, Fisheries and the Environment, Ms Makhotso Soty; Deputy Minister of Human Settlements, Ms Pamela Tshwete; Deputy Minister of Agriculture, Land Reform and Rural Development, Mr Mcebisi Skwatsha.



**Above:** Women in the environment sector from all walks of life being recognised and awarded for their outstanding contribution.

**W**omen are driving change and making an impact in waste management all over the world. Their projects include everything from recycling initiatives to community education programmes. They have inspired their communities to Reduce, Reuse, Recycle and Recover, fostering a more sustainable and eco-conscious way of life.

To celebrate these milestones, the Deputy Minister of Forestry, Fisheries and the Environment, Ms Makhotso Soty led and addressed the 2023 Women in Environment Dialogue together with the Deputy Minister of Human Settlements, Ms Pamela Tshwete, Deputy Minister of Agriculture, Land Reform and Rural Development, Mr Mcebisi Skwatsha and Deputy Minister of Trade, Industry and Competition, Ms Nomalanga Gina in East London, Eastern Cape.

Speaking at the Dialogue convened under the theme: **Celebrating women in the waste management sector today for sustainable future**, the Deputy Minister highlighted the need to acknowledge the remarkable achievements of women who have been the driving force behind the innovative projects in the waste sector.

"Our country is facing increasing environmental challenges; it is essential to have individuals who not only recognise the issues at hand but actively engage in solutions. The women we honour

today have demonstrated their commitment to environmental stewardship by implementing projects that address waste management issues in creative and sustainable ways," she said.

The Women in Environment Dialogue brings together women in the waste management sector, academia, government, private sector, civil society, community, youth and international partners with the purpose to celebrate women's achievements in the environment sector and to create opportunities for possible partnerships for Women in Waste Management and strategic partners.

Ms Chantelle Taylor of the Gauteng-based Environmentorz NPO, which creates and sells embroidered bracelets with messages such as 'Save water, love trees, plant trees, and keep clean,' expressed her delight at being a part of the Dialogue.

"This is a fantastic platform for women in the waste management industry like me because we get to showcase the work we do with recyclable materials. I am still overwhelmed by the response we are receiving because we have received a lot of buyers and one potential investor has approached us," she said.

The two-day event concluded with a ceremony honouring and empowering ordinary women for their outstanding contributions to the environment.



## About the contributor: Dimpho Matlanato

Dimpho Matlanato is an intern in the Communications and Advocacy Chief Directorate. She holds a BA Degree in Journalism from the University of Johannesburg.



# Let's learn about the African penguin

They're fluffy, cute and wear tuxedos. These flightless birds are a marvel to behold and simply incredible creatures. There are **18 recognised Penguin species** in the world...

## Facts about the African Penguin

- 25 April is World Penguin Day.
- The species, which is endemic to South Africa and Namibia, has decreased from more than a million breeding pairs to just about **10 000** pairs over the last century.
- The African penguin is critically endangered, and with current rates of population decline, science tells us these iconic creatures could be functionally extinct by 2035.
- Competition for food is thought to be one among a set of pressures that are contributing to the decline of the African Penguin population.
- In September 2022, the Department declared some areas around the major penguin colonies closed to commercial fishing for anchovy and sardine.

## Breeding

- They breed only in South Africa and Namibia;
- They breed between four and six years of age;
- They usually lay two eggs; and,
- Nests are built by both sexes in either burrows, guano, clefts between rocks or on the surface and vegetation as well as artificial nest boxes. Their nest material includes seaweed, pieces of vegetation, rocks, shells, bones and feathers;
- Penguins rely on their feathers for warmth and waterproofing.
- African Penguins are good swimmers and may **dive up to 130m**.

## Why are penguins important in the ecosystem?

- Penguins are highly adapted to the environment in which they live.
- They are sensitive to ecosystem changes and are vulnerable to threats at and around their breeding colonies.
- This makes them very useful as ecosystem indicators to help provide relevant information regarding the health of the marine ecosystem.

For more information on Penguins and World Penguin Day, visit [www.dffe.gov.za](http://www.dffe.gov.za)



forestry, fisheries  
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Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA





**Minister of Forestry, Fisheries  
and the Environment**

Ms Barbara Creecy  
Private Bag 313  
Pretoria, 0001  
Environment House  
473 Steve Biko Road  
Arcadia Ext 6  
Pretoria  
Tel: (012) 399 8743

**Deputy Minister Forestry, Fisheries  
and the Environment**

Ms Makhotso Magdeline Soty  
Private Bag X313  
Pretoria, 0001  
Environment House  
473 Steve Biko Road  
Arcadia Ext 6  
Pretoria  
Tel: (012) 399 8854

**Director-General of Forestry,  
Fisheries and the Environment**

Ms Nomfundo Tshabalala  
Private Bag X447, Pretoria, 0001  
Environment House  
473 Steve Biko Road  
Arcadia Ext 6  
Pretoria  
Tel: (012) 399 9008  
E-mail: dg@dffe.gov.za

**Call Centre:** 086 111 2468 • [callcentre@dffe.gov.za](mailto:callcentre@dffe.gov.za)  
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For any enquiries or contributions, please contact:  
Ms Erica Mathye, Tel: 012 399 8976 email: [EMathye@dffe.gov.za](mailto:EMathye@dffe.gov.za)